

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-420U-7

Relating to Exemptions under  
Sections 38390 and 38391 of the Vehicle Code

Engine Control Systems Ltd.  
AZ Purifier and AZ Purimuffler

Pursuant to the authority vested in the Air Resources Board by Part 5, Division 26 of the Health and Safety Code and Sections 38390, 38391, and 38395 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That installation of the AZ Purifier and AZ Purimuffler devices, manufactured by Engine Control Systems Ltd. of 165 Pony Drive, Newmarket, Ontario, Canada L3Y 7V1, has been found not to reduce the effectiveness of the applicable engine emission control system, and therefore, the AZ Purifier and AZ Purimuffler devices are exempt from the prohibitions in Sections 38390 and 38391 of the Vehicle Code for installation on the off-road compression-ignition engines listed below. This exemption is limited to engines certified to California's Tier 1 exhaust emission standards. This exemption is also limited to engines used in equipment used at the ports, railway yards, and intermodal operation such as a yard tractor, lift truck, top pick, side pick, and a gantry crane.

Year	Manufacturer	Engine Model/Configuration
1996-2002	Case	3.9/5.9/8.3
1996-2002	Cummins	3.9/5.9/8.3/10.8/11/14/15/19
1996-2002	International	7.6/8.7
1996-2002	Komatsu	3.9/5.9/8.3/11

The AZ Purifier and AZ Purimuffler exempted under this Executive Order can be installed on engines operated using standard California diesel with a maximum sulfur content of 500 parts per million by weight (ppmw), ultra low sulfur diesel (ULSD) with a maximum sulfur content of 15 ppmw, or PuriNOx water emulsion fuel based on either standard California diesel or ULSD. The AZ Purifier and AZ Purimuffler devices exempted under this Executive Order are identified in Attachment A.

This exemption is based on emission tests conducted by Engine Control Systems Ltd. with the AZ Purimuffler. Test data showed that the AZ Purimuffler has no adverse impact on engine emissions. The same emissions impact is expected when the AZ Purifier and AZ Purimuffler are installed on any of the engines listed above.

This Executive Order is valid provided that installation instructions for the AZ Purifier and AZ Purimuffler do not recommend tuning the engines to specifications different from those of the engine manufacturer.

Changes made to the design or operating conditions of the AZ Purifier or AZ Purimuffler, as exempted by the Air Resources Board, which adversely affect the performance of the engine's pollution control system, shall invalidate this Executive Order.

Marketing of the AZ Purifier and AZ Purimuffler using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board.

This Executive Order shall not apply to any AZ Purifier or AZ Purimuffler advertised, offered for sale, sold with, or installed on an off-road engine, vehicle, or equipment prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order does not constitute any opinion as to the effect the use of the AZ Purifier and AZ Purimuffler may have on any warranty either expressed or implied by the engine manufacturer.

No claim of any kind, such as "Approved by the Air Resources Board," may be made with respect to the action taken herein in any advertising or other oral or written communication.


In addition to the foregoing, the Air Resources Board reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of California Code of Regulations, Title 13, Section 2474, et seq.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF ENGINE CONTROL SYSTEMS LTD.'S AZ PURIFIER AND AZ PURIMUFFLER.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order. The Executive Order may be revoked only after a ten-day written notice of intention to revoke the Executive Order, in which period the holder of the Executive Order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request, and the Executive Order may not be revoked until a determination is made after a hearing that grounds for revocation exist.

Executive Order D-420U-2, dated March 3, 2003, is hereby superseded and is of no further force and effect.

Executed at El Monte, California, this 25<sup>th</sup> day of January 2006.

  
Allen Lyons, Chief  
Mobile Source Operations Division

## Attachment A

AZ Purifier and AZ Purimuffler	
ECS Part Number	Catalyst Model
A16-XXXX A17-XXXX A18-XXXX	AZ27
	AZ28
	AZ29
	AZ30
	AZ31
	AZ33
	AZ34
	AZ36

**Note:** ECS Part Number  
Pre-fixes A16, A17, and A18 designate converter design format:  
(1) A16 designates the Purifier format (converter only).  
(2) A17 designates the Purimuffler format (converter and muffler).  
(3) A18 designates the Purimuffler format (converter and muffler, UL approved spark arresting).

Catalyst Model  
AZ designates catalyst formulation.  
Numbers 27 through 36 designate catalyst size.  
For custom direct fit applications, the part number will describe the converter design format and application, i.e. AZ Purimuffler for ABC Trucking with Cummins B engine.